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LAKE CARRIERS' ASSOCIATION.

To consider and take action upon all general questions relating to the navigation and carrying business of the Great Lakes, maintain necessary shipping offices and in general to protect the common interest of Lake Carriers, and improve the character of the service rendered to the public.

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H. S. Hodge,	Detroit.		

THE LAKE CARRIERS' ASSOCIATION.

At a largely attended meeting of the Lake Carriers' association, held on Saturday, at President M. A. Bradley's office, Cleveland, O., the following resolutions were unanimously adopted:

"WHEREAS, A Divine Providence has removed from among us another of our members, R. K. Winslow, who was an original member and a leading spirit in the organization of the Cleveland Vessel Owners' association, a man identified with the beginning and the growth of lake commerce, and foremost from a very early day in the development of the business interests of the city of Cleveland,

"*Resolved*, That we mourn in the death of Mr. Winslow, the loss of an energetic, successful business man, a thoroughly informed and intelligent gentleman of cultivated mind and tastes, a kind friend, and one whom we shall greatly miss.

"*Resolved*, That to his stricken widow and bereaved family we extend profound sympathy, and that as a mark of respect we attend the funeral in a body.

"*Resolved*, That the secretary be instructed to spread these resolutions on the minutes of the association and to send a copy to the family of Mr. Winslow and furnish copies to the press."

A meeting has also been called for this week to take action on the frequent groundings and collisions on Lake George. It is probable that a set of resolutions calling on the government to widen the channel through Lake George will be unanimously adopted.

ACKNOWLEDGMENTS.

We are under great obligations to the *American Shipbuilder*, the *Engineers' Gazette*, London, England, and THE MARINE RECORD, Cleveland, for the publication of our portrait and synopsis of our life work. In every instance these compliments were wholly voluntary on the part of the publishers, and are highly prized by as evidences of their good will. We would like to say a great deal more, but as the subject happens to be one that does not permit of further allusion, we must be content with this simple acknowledgment of our appreciation of our friends' compliments.—*The Engineer, N. Y.*

UNITED STATES LIGHTSHIP SERVICE.

The new lighthouse tender Columbine, built by the Globe Iron Works Co., Cleveland, O., and destined for service on the Northern Pacific coast, will sail from New York for that station, this week, under command of Lieutenant Commander, C. H. West, U. S. N. She will stop en route at Rio Janeiro, Montevideo, Valparaiso and San Francisco, and is expected to reach Portland, Ore., in about seventy days, via. the Straits of Magellan.

Plans and specifications have been prepared by the Lighthouse Board for a first-class steam lightship for service on New South Shoal, off Nantucket, Mass. The vessel will be 110 feet long and 26 feet and 10 inches broad, with a draught of 6 feet, and will cost $70,000. Until she is completed lightship No. 54, built by F. W. Wheeler & Co., at West Bay City, Mich., is now being fitted out at Wood's Holl, for service on these dangerous shoals.

The Lighthouse Board is preparing plans and specifications for four lightships, three of which are destined for service on Lake Michigan, and one for service on Lake Erie. These vessels will be about 90 feet long and 20 feet beam, with a draught of 8 feet, and will have all the modern illuminating apparatus, and other special service equipments. A fifth lightship for service at the foot of Lake Huron may also be passed upon at an early date.

DETROIT'S HANDSOME NEW YACHT.

Many handsome steam yachts already hail from the several important lake ports, and Detroit has just added to her former fine fleet a new Herreschoff built craft, named the Truant, built to the order of Truman H. Newberry, and of the following general dimensions: 130 feet over all, 108 feet on water line, 17 feet 8 inches beam and six feet draft of water.

The yacht made the passage from Bristol, R. I., in good time and proved herself an excellent sea boat, as well as affording all modern conveniences as a family cruising yacht. The Truant is a valuable addition to Detroit's fancy tonnage.

A MODERN SAILING SHIP.

The improvements which have been effected in sailing ships during the past ten years have resulted not only in great economy in working, but also in comfort to the crews. This is very strikingly exemplified by the large cargoes carried, and the comparatively small crews. One of the most completely equipped sailing ships built in England is the James Kerr, of Liverpool, which has just sailed for Calcutta. This vessel is built of steel, and is about 3,600 tons dead weight. She is rigged as a four-masted barque. All the spars are of steel, and there are double topgallant and topsail yards. The yards on all three masts are of the same relative size, so that a spare topgallant sail can be bent on either the fore, main or mizzen topgallant yard. Another feature is the employment of small capstans of a very ingenious make, whereby the heavy topsail yards, weighing some four tons apiece, can be hoisted by five men in about ten or eleven minutes. Formerly, setting the topsails required all hands at the halliards. Now it only takes one-third of the watch on deck. These capstans are not worked by handspikes, but are turned by winch handles; they have a fast and slow speed corresponding to a greater or less power exerted. They are manufactured by the American Ship Windlass Co., of Providence, R. I., and are beyond question most useful machines for sailing ships. It is learned that the Liverpool agency of the American Ship Windlass Co. has received an appreciative and extensive patronage during the past year, and it looks as if the Britishers freely admitted that the American Ship Windlass Co. manufactured the best windlasses and capstans in the world.

A RAFT TOWING RECORD.

The tug Alanson Sumner, of the Howard Towing Association, of Port Huron, has just completed a feat of raft towing by taking care of a raft of 2,300,000 feet through the recent northeast gale. The raft was towed from Tawas for the G. B. Hodgman Manufacturing Co., of Sandusky, O., and when delivered at Sandusky made twelve rafts the tug Sumner has delivered this season, several of them having been taken through gales on Lakes Huron and Erie.

Capt. Chris Smith, of the tug Sumner, has proved himself a man of extraordinary good judgment in handling rafts. The Howard Towing Association have towed and delivered twenty-eight rafts this season, not having lost a stick of timber. This is considered a big record for four tugs.

TWO LARGE OCEAN TUGS.

Two of the largest tugs in the United States are now ready for delivery to the Reading Railroad Co. by the Neafie & Levy Ship-building Co., Philadelphia, Pa. They were built originally to the order of the Lehigh Valley Railroad Co. Both vessels have been planned and constructed to withstand the heaviest weather necessarily incident to outside coast towing, and nothing essential has been spared to make them seaworthy and staunch enough to live in the hardest gale.

Each vessel is a duplicate of the other in general construction and machinery. They have compound engines of the most powerful and economic type. Fire apparatus has been placed on board, which can throw a stream further than any fire engine in the world, and when laid up at night they will always be ready, at a moment's notice, to respond to a fire alarm and protect property along the river front and amongst shipping.

Each has a length of 135 feet, 27 feet beam and 15 feet depth of hold. The engines are of the triple expansion type. The steam is supplied from Scotch boilers. The tugs are built entirely of iron, and have been named the Honeybrook and Plymouth.

The Reading Railroad Co.'s fleet now numbers ten steamers and ten barges, exclusively engaged in the coasting trade. This is the fleet which Capt. Henry, late marine superintendent of the Lehigh Valley Line steamers, out of Buffalo, will probably take charge of on his return to the coast.

RECORD OF PACIFIC COAST MADE ENGINES.

The Peru, of the Pacific mail line to China, recently built at the Union Iron Works, San Francisco, in a remarkably short time, has a record, says *Industry*, for the first performance that has not been excelled in any country. The machinery was started at the dock and ran for a few hours, not more than five. The vessel next went out to sea on her trial trip, and without mishap of any kind, ran twenty-two hours, including in that her test for speed over the measured course. She was then loaded and ran to Yokohama, a distance of 4,750 miles, without her engines being stopped. If there is any record to excel this, it will be a favor to have it sent in. The chief significance of the fact is in showing that work of the highest class was done on the vessel.

NEWS AROUND THE LAKES.

CLEVELAND, O.

A new wheel is being got ready by the Globe Iron Works Co. for the Mutual Line steamer Cambria, now being towed down from Escanaba by another of the same line boats.

Five lame ducks are now at this port, and some of them are pretty badly lamed too. They are the steamers Norman, Republic and Nahant, and schooners Kent and Moonlight. The Corrigan Line steam spout barge Neff will also have about a $10,000 rebuild this winter.

George Shacket, of Marine City, who arrived at Fairport from Buffalo Saturday evening to ship as steward on the steamer Alex Nimick, fell into her hold at 7 p. m. Saturday and received serious injuries. He was sent to the Marine hospital, at this port. He will probably recover from his injuries.

Capt. George Simpson, compass adjuster, is straightening up his lake work preparatory to leaving for the coast. Any of the boats which he has adjusted, whose masters desire to have their "sea clocks" again looked at, or those who have found a change in the deviation since adjustment, would do well to notify him as early as possible.

The handsome steel steamyacht Comanche was taken out on a trial trip Wednesday afternoon and everything worked splendidly. She will start for the coast in a few days. Mr. and Mrs. H. M. Hanna and family, Mr. and Mrs. M. A. Hanna, Mr. John F. Pankhurst, Capt. Geo. P. McKay, Capt. Penney, U. S. A., Mr. Walter Miller and distinguished guests enjoyed the two-hour spin on the lake.

Capt. C. E. Benham says there is no truth in the report published in some of the local papers that the tug Benham had sunk at the Sault. The C. E. Benham was thoroughly rebuilt at this port last winter, and is now one of the largest and best tugs on fresh water. She is stationed at Sault Ste. Marie, under the management of Capt. Chapman, and is enjoying an excellent and increasing patronage.

Light-house keeper Louis Walrose has resigned from the keepership of Presqu'ile coast light, at Erie, Pa., and moved his family to this port. The resignation was brought about through a desire to offer his children better facilities for attending the public schools; otherwise Mr. Walrose was well satisfied and he speaks very highly of the light-house service. Thos. L. Wilkins has succeeded Walrose as keeper of the light.

It will require about ten days to repair the steel steamers Norman and Republic. Equal damages to each on the starboard bow will cost about $5,000; trimmed well by the stern, repairs can be effected with the vessels afloat; in fact, half the work is already done on the Norman, at the Globe Iron Works Co. shipyards, and Superintendent John Smith has a well-known knack of utilizing men, moments and material in all cases of this description.

The Ship Owners' dry dock has been kept very busy all summer and there is no let up to the regular and steady patronage for drydock work. A handsome dividend was declared at the last annual meeting and the shareholders in this important industry are more than likely to be further gratified at the showing made this year. Mr. George Quayle, late of the firm of Thos. Quayle's Sons, shipbuilders, is the energetic manager of the Ship Owners' drydock.

The new whaleback steamer Pathfinder, Captain McFarlane, had a brush with the handsome steel steamer Mariska, on Lake Erie, last Friday morning, and simply dropped her astern, both steamers were bound down loaded. The Pathfinder came from the "Soo" to Cleveland in 34 hours, 23 minutes, with 3,700 tons of ore. This shows an average speed of nearly 13½ miles an hour all through, and much better time would have to be made on account of slowing down through the rivers. The time from Detour to this port was 29 hours. It is learned that Capt. McFarlane is well pleased with his new command, though it is but just to state that while the foregoing was reported by first-class authority, Capt. McFarlane was not seen in the matter.

Mr. W. H. Van Tine calls attention in the *Leader* to a gross outrage which is permitted on Superior street and to which THE RECORD man is almost a daily witness. Old Captain Bartlett, who rejoices in the cognomen of "the good man at the wheel," is engaged in selling fruit on the street, and is naturally a quiet, inoffensive man, and attends to his business in an orderly and gentlemanly manner when allowed to do so; but, as Mr. Van Tine says, he hardly passes through the street without being assaulted by a gang of boys, who yell and throw missiles at him and annoy him in various ways. The police take no notice of the matter, and it has been frequently stated by the "g. m. a. w." that they encourage the boys. Certainly they never attempt to stop them. Is it not time that this state of things was terminated?

Material is now being received at the yards of the Cleveland Ship Building Co., and large gangs of men are again at work on the new steamers. As an indication of the exactness observed in laying down a large steel steamer, an incident which had escaped THE RECORD man was brought under his notice in connection with the new steamer building to the order of M. A. Bradley and others, this steamer is now nearly all in frame and a considerable portion of her water bottom in place. Looking through a rivet hole in one of the after floor plates, the eye could carry the entire length of the vessel through the corresponding rivet hole in each floor plate, this exactness was found at all places on either side of the keelson and speaks highly of the preparatory work on the plans and material entering into the construction. The system of lapped butts on the shell plating has been adopted by the company and extra longitudinal efficiency is being given the large steamers now being built.

The Cleveland Shipbuilding Co. has been awarded the contract for the machinery of the new passenger steamer which the Chicago Shipbuilding Co. is building to the order of the Lake Michigan & Lake Superior Navigation Co. The engine will be triple expansion, the diameter of the high pressure cylinder being 23 inches, that of the intermediate cylinder 38 inches, and the low pressure cylinder 62 inches, by 36 inches stroke of piston. The engine will be constructed with a view to rapid revolutions, and will make 110 turns a minute, which should drive the boat through the water at a high rate of speed. The boilers will be two in number, 11 feet in diameter by 21 feet in length. They will be of the gunboat type, and each boiler will have two 44-inch furnaces. The engine will indicate about 1,800 horsepower, and will turn a sectional propeller about 13 feet 6 inches in diameter, with 20 feet pitch. The contract calls for the completion of the work by July 1, 1893. The value of the machinery will foot up to about $50,000.

GRAIN SHORTAGES AND FREIGHT RECORDS.

Special Correspondence to The Marine Record.

BUFFALO, N. Y.—Vessel men at this port are complaining about numerous shortages in grain cargoes, which they claim have been occurring all season. Captain Lehman, now on the City of Naples, but formerly on the City of Glasgow, says he has made nine trips to Buffalo this season, and that he has run short every time from 23 to 264 bushels, the total amounting to over 1,000 bushels. His losses cannot be traced to any one house, as his cargoes have been nearly all "peddling jobs," as he characterizes them, unloading small lots at different elevators. The owners of the Brazil and America have had similar losses; the W. H. Gilcher on her last trip with wheat was 180 bushels short; the R. E. Schuck, 180 bushels; the John B. Merrill, eighty bushels. Captain Ed. Maytham thinks this kind of business could be stopped if the Lake Carriers' Association took a hand in the game and refused to let vessels in the association load unless a provision was inserted in the bill of lading specifying the amount loaded to be "more or less." In this case the vessel would get no benefit from overruns and would not be liable for shortages. Capt. Maytham thinks scales would tell true stories under such an arrangement.

Captain Garden, of the Union Line steamer Rochester, has been forced to temporarily resign his command, on account of illness.

The schooner J. J. Barlum had her jibboom carried away Monday by one of Hingston & Wood's dredges which was in tow of the tug Genevieve.

The steam barge J. N. Glidden towed the loaded barges Warmington and C. H. Burton from Escanaba to Buffalo, a distance of 700 miles, in 82 hours.

The Soo Line steamer Pillsbury, which collided with the Nahant, arrived at this port last week. Her captain states that his steam steering gear gave out, which caused the collision.

The excursion steamer Eldorado, built by Sloan & Cowles, was launched last Thursday. She is 80 feet long, 17½ feet beam and 7½ feet deep. She is equipped with a Sutton high pressure engine 13 by 16 inches, and her boiler measures 5½ by 10 feet.

John Andrews, a lake fireman and a member of the Lake Marine Firemen's Benevolent Association, was drowned in the Erie Canal last week. His body was discovered last Monday. Andrews was a good looking man and dressed neatly, thereby earning the sobriquet of "the dude fireman." He had no relatives.

The lumber barge Tailor, in tow of the tug Sweepstakes, struck a rock while going down Niagara river last Monday morning, and was so badly injured that she would have sunk but for her lumber cargo. She was full of water on her arrival at Tonawanda. The Tailor will be repaired at the Union drydock.

David Bell, the veteran ship-builder, will build the revenue steamer Calumet, which is to go to Chicago. Mr. Bell's bid was about $2,000 higher than that of the Union Drydock Co., and was secured by the Union company throwing up their contract. Mr. Bell is putting a furnace and steam hammer into his plant and will hereafter make his own steel forgings.

Louis Kulpf, a representative of the Lumber Shovers' Union, had warrants sworn out for eleven non-union men who were working on the E. S. Tice and consorts, in violation of the old Sunday labor law. The men were arrested. The Union has become strictly law-abiding in a very short time, and seems ready to obey enthusiastically any law which says they shall not work or let any one else work.

The steamer E. C. Pope last Wednesday took out from Buffalo the largest coal cargo ever carried on the lakes—3,950 tons. Her draft was about 16 feet 4 inches. Capt. John Shaw says if he had known the load was so near the 4,000 ton mark, he would have put on the extra 50 tons if he had to pile it in the cabin, and even at the risk of a slight scraping along the bottom in the rivers. Last week also saw the largest straight load of flour which was ever carried on fresh water, the steamer W. H. Gilbert bringing down 38,054 barrels, or over 3,800 tons.

P.

THE CHICAGO MARINE BUDGET.

MARINE ENGINEERS' ANNUAL CONVENTION.

Special Correspondence to The Marine Record.

CHICAGO, ILLS.—The National Marine Engineers' Beneficial Association will hold their 18th annual convention in this city, Jan. 22-27, 1893. There is promise of representation from every sea, lake and river port in the United States. Headquarters will be at the Sherman House, where an opportunity will be given to exhibit any specialties to visiting engineers. A reception and ball will be held at the Sherman House on the evening of January 25th, 1893. Tickets can be procured from any of the members of M. E. B. A., No. 4 and 68, who will bear the expenses attending the convention and have arranged to hold but one annual ball instead of two as heretofore. We feel sure that the members of M. E. B. A., No. 4 and 68 will use every endeavor to entertain their visitors in the very best manner possible and we wish them great success.

The schooner T. Y. Avery went into winter quarters last week.

Grain freights on Tuesday were on a basis of 2¼ cents on corn to Buffalo.

The steamer Charles A. Street has been sold by Captain John Laing and others to Ed. Ayer & Co., cedar dealers.

At a meeting of the Seamen's Union last Friday morning, at this port, it was decided to raise seamen's wages to $3 per day.

The schooner Kate Hinchman, of this port, was sold at marshall's sale at Kenosha, October 6th, to John Skone, of Chicago, for $1,000.

The splendid new steel steamer Thomas Maytham was successfully launched at the Chicago Ship Building Co.'s yard Saturday morning.

The fire boat Fire Queen has had her machinery and boiler placed on board and her cabin, engine and boiler rooms and pilot house are being erected.

The Canadian steamer Sir S. L. Tilley and consorts George M. Neelon and James R. Benson have been in this port since last Thursday morning, waiting for a grain charter.

The L. M. & L. S. T. Co.'s new steamer, being built by the Chicago Ship Building Co., will be supplied with a powerful triple expansion engine and navy type boilers, which are to be built by the Cleveland Ship Building Co.

The schooner Carrier arrived here Friday afternoon, in tow of the I. T. Co.'s tug D. P. Hall. The schooner was leaking badly and was minus a large portion of her deck load of shingles and lumber, which was thrown overboard Friday morning to release her from Racine reef.

The whaleback steamer Samuel Mather, Captain John H. Smith, is proving herself a larger carrier, she left Chicago on the night of October 5th with 116,536 bushels of corn for Buffalo. Capt. Smith pronounces her an excellent boat in heavy weather and very speedy.

The schooner Cape Horn lumber laden going up Chicago river early Monday morning in tow of the tug Chicago, collided with the protection piles of the abutment on the starboard side of Wells Street bridge and carried away her jib-boom, bowsprit and head gear, and also carried away five joists under the side walk of the entrance to the bridge.

At Miller Bros.' shipyard the tug Welcome was in drydock for repairs to shoe and some calking, tug Ira O. Smith for repairs, tug Gertrude for new bottom planking, steamer Chicora for repairs to her rudder, schooner Helen Pratt for some calking, steam barge M. T. Greene for repairs, steamer Petowsky for fixing stern bearing, schooner Carrier for survey and repairs—she will require a new keel and considerable repairs to her bottom.

The Dunham Towing and Wrecking Company have purchased the fine tugs Charles Halladay and C. W. Elphicke and will control the towing at South Chicago. Martin Hansler retains an interest in the tugs and will be superintendent. Another tug is being built for the line at Saugatuck by James Elliott, shipbuilder. The Vulcan Iron Works, Chicago, are building a high pressure engine 22 by 24 for the new tug and John Mohr & Son, a new marine boiler 8 by 13 to be allowed 140 lbs. steam pressure.

Dunham's tug Mollie Spencer is to receive two Warrington water tube boilers 7 feet wide 8 feet long, steam pressure 250 lbs. to the square inch. Owing to the lightness of these boilers compared with the ordinary marine boiler, the tug will have sixty per cent. more power than she now has on the same draught of water. This increase of power will be an advantage which will be greatly appreciated by all marine men. The tug's engine will be compounded on a plan devised by George Warrington, the high pressure cylinder being within the low pressure one, and connected directly to the crosshead. Independent condensor and feed pump will be provided, all arranged to take care of this enormous pressure. This innovation will be watched with great interest by marine men, and if successful, as it promises to be, will work a radical change in marine machinery of all kinds.

Wrecker Murphy, who was in the city Friday, stated that the pontoons and chains were taken away from the steamer Ogemaw, sunk in sixty feet of water near Burnt Bluff, Green Bay. Everything was ready to raise the sunken steamer, but high winds and sea stopped work for over a week, and, there being no prospect that the weather would improve, he had decided to give up the work until next July. The Ogemaw is in no danger from ice and will suffer no particular harm by remaining under water for another year. Elphicke & Co., the underwriters, whose company now owns the Ogemaw, do not take kindly to the failure of the wrecking operations this year. After the contract for raising the steamer was let, the pontoons and wrecking boats were diverted to other contracts for nearly a month. The loss of all the work done this year on account of the delay will be a serious one.

WILLIAMS.

BAY CITY MARINE.

Special Correspondence to The Marine Record.

BAY CITY MICH.—The fire tug Geyser which has been stationed at Saginaw the past season is now at this point and the fire tug Lee has been sent to take her place. The Geyser being a stronger tug can be used for heavier work at this end of the river.

The steambarge Ferret was sold at auction by U. S. Marshal Wallace of Detroit to secure a claim of $150. Jennison & Son were the purchasers. She was owned by Capt. McGarry of this port.

Will Armstrong, manager of the Boy Line at Chicago, has returned home, having laid up the Post Boy and Sailor Boy for the season last week. The cold and the recent rough weather reduced the passenger business to such an extent that it did not pay to run.

The long expected raise in freight came last Saturday, when an advance of 25 cents per thousand was made. The rate from Bay City to Tonawanda and Buffalo is now $2.00 and to Cleveland and Ohio ports $1.75. From Saginaw the rates are 12½ cents higher in each case. The shipments for September was nearly up to the average, being but a trifle smaller than for a corresponding period last year. Lumber 27,044,000; shingles

6,000,000; lath 2,000,000; salt 10,200 bbls. The shipments from Saginaw were as follows: lumber 12,325,000; shingles 3,200,000; lath 500,000.

A great deal of repairing has been done at the dry dock during the past two weeks. The tug Traveler received a new shoe and wheel. The Winslow new frames, ceilings, etc. Steambarge Donaldson repairs to her steering gear, Edmund Hall's dredge received two new spuds, each 60 feet in length, and the schooners Muir and Levi general repairs.

The steambarge Oneida, rebuilt at Davidson's yard this season has gone into commission. She now rates A-2 and her carrying capacity is 650,000 feet of lumber. She takes her first cargo to Erie, Pa.

It is reported that the Butman & Rust mill site recently purchased by the Bay City Dredging Company, will soon be utilized as a shipyard. The old buildings are being torn down and the place cleared up. The location is all that could be desired, being almost opposite Capt. Davidson's yard and having a frontage of three blocks, from 16th to 19th streets. The company now own two dredges and two tugs, and have all the necessary financial backing to make it a success.

One tug and one schooner was launched from Davidson's yard last week. The tug was built for the Davidson Transportation Company, and is 90 feet long, 20½ feet beam and 8 feet deep. Registered tonnage 71. She has not yet been named. No. 52 the first of the four schooners now building by the company to be launched. Her length over all is 220 feet, length of keel 211 feet, beam 35 feet, depth 17 feet. Gross tonnage 1,045, net 964. She will be named the City of Aberdeen.

J. P. R

TORONTO MARINE—WHARF EXTENSION.

Special Correspondence to The Marine Record:

TORONTO, CAN.—Already the majority of the passenger steamboats which ply to and from this port have gone into winter quarters; and so few sail or steam freight-carriers are moving that the marine business at this end of the great lake chain is practically done for the season. Dullness has been more noticeable this summer in the Canadian navigation trade than ever before. All the passenger steamers here have been laid up excepting the Lakeside and the A. J. Tymon. The Lakeside is plying between St. Catherine and this port, and the A. J. Tymon has taken the place of the steamers Chicora and Cibola, on the Niagara-Toronto route.

There is no doubt that another factor toward the decay of the inland Canadian marine operations is the policy of the Dominion government with regard to canal tolls and coasting laws. United States citizens are progressing with the times and building *fin de siecle* vessels, but Canadians are restricted by shallow canals and taxed incomes to moribund boats. Something must be done shortly, and it is the opinion of all rightly thinking people here that a commercial revolution of marine laws of some sort is pending.

There will be no lack of wharf room at this port next season, to judge from the energetic actions of Messrs. William and Robert Freeland, owners of the Milloy wharf, at the foot of Yonge street here. They own a width of 500 feet of water front, and they are extending this in the shape of two quays out to the new line. Each of these docks will be 430 feet long by 60 feet wide. Between the two will be a slip 130 feet wide, and on the outside of each a slip 110 feet across, all deep enough to float the largest vessels which come to this port. Dock No. 1 and its warehouse are now approaching completion, and work on No. 2 will start early next spring. The quantities of fruit which come across Lake Ontario from Niagara and St. Catharines, and are landed at the Milloy wharf, are enormous. The Messrs. Freeland have made and are making large provision to facilitate the handling of so much lusciousness. The new Milloy warehouse, which is an exact counterpart of the other one to be built next summer at the foot of Scott street, is 375 feet long and covers 50 feet across, including the overhanging eaves on each side. Each end of this has an awned open space, the northern one 85 feet long and the whole width of the building, to be used as a fruit market, and the southern portion 34 feet. Vesselmen are giving Messrs. Freeland great praise.

This time last year it was difficult for the coal elevators to get away with the innumerable cargoes coming in from the south shore ports; they rigged up electric lights on the docks and worked night and day right till the close. If they have one schooner a week now they are doing well. This is easily explained: There comes a rumor sub rosa that the all-encompassing Reading, etc., coal combine will explode shortly by reason of its own internal accumulations, and then there will be a drop in the price of coal which shall astonish the known world. Consumers did not all have the cash ready while coal was at $5 or $5.50, and dealers would not book orders as formerly. Still the figures kept increasing, and quite a few people here laid in their winter supply of coal at $6 per ton. This was where the line was drawn, and there have been very few sales since the price touched $6.50 and threatened to rise to $7 or over. Canadian exporters ceased to buy, recognizing that there was no demand for stocks already on hand, and not desiring to increase their holdings at the present high figures with a prospect of a dire revulsion.

LATER—Oct. 12th. Coal is coming in in better quantities lately, as many as six schooners—the E. H. Rutherford, Albacore, Clara Youell, Keewatin, Laura and the Sir C. T. Van Straubenzee—arriving in one day from south shore ports. A few cargoes of lumber are going out for Oswego, and this week the schooner W. T. Greenwood took the first load of barley across the lake.

J. A. C.

Capt. C. W. Gillette will superintend the new ore dock at Superior and furnish trimmers for vessels. The dock is 24,000 feet long with pokets,c and 15,000 feet approach. There are 400 pockets, 200 on each side, each having a capacity of 180 tons. Thirty pockets are now ready. Work will be pushed on the others, and all will be completed before shipping is commenced, on October 20.

LOSS OF THE STEAMER NASHUA WITH ALL HANDS.

As we went to press last week grave fears were entertained for the safety of the steamer Nashua, Capt. Richard P. Millen, Toledo, O. The crew consisted of thirteen persons and two passengers.

On Tuesday morning the Nashua let go the tow line of her consort the Ryan, in a heavy northwest gale off Goderich, Lake Huron, and it was then known that the steamer had disabled her machinery, her deck load of lumber was gone and she was flying a signal of distress. The Ryan made sail for Port Huron and spoke the steamer W. H. Gratwick, asking her to go back and render assistance to the Nashua. The Gratwick searched for four hours and not sighting the Nashua she again proceeded on her course. The tug Howard was dispatched from Port Huron to search for the Nashua, and on Thursday, October 6th, she reached Sand Beach and reported finding the Nashua drifting bottom up, off Bayfield, Ont., with a large hole in her side, probably caused by the boiler exploding, no trace of the crew could be found and it was surmised that all had perished, the hull has since drifted ashore near Bayfield, and one body has been picked up. All hope of any of the crew having reached the shore is now given up.

Capt. Richard Millen, who was master and part owner of the Nashua, was one of the best-liked seaman on the lakes, open-hearted, generous and free, Dick Millen was the synonym of hearty friendship and good will, and a seaman from the ground up. Captain P. L. Millen of the steamer Joliet, and Capt. James Millen of Detroit, are his brothers, and Capt. Dick had a heart big enough for the trio.

John E. Putnam of Detroit, was chief engineer, and leaves a wife and four children. Captain Archie Muir of Port Huron, piloted the Nashua to Byng Inlet, Ont., and was only on the vessel for the trip, he was fifty-nine years of age, and about thirty years ago he took the schooner Alexandria across the Atlantic, he was a genial, kind-hearted seamen and had a good word for everyone, he leaves a widow and five grown-up children. Charles Shepard, of Brockway, Mich., was first mate. George McCullom of Detroit, watchman, and Joseph H. Wilson, fireman. The two lady passengers were Mrs. Millen, the captain's wife, and Mrs. Shepard, wife of the first mate. The names of the remainder of the crew have not yet been ascertained. A strict watch is kept patroling the beach to recover any bodies that may be washed ashore.

The Nashua was built at Cleveland in 1868, for the N. T. Co., and was a staunch, well-found sea-worthy steamer. She was recently purchased by Capt. Richard P. Millen, of Toledo, and J. J. McLean, of Detroit, and was good for many years service in such excellent hands as her late owners. It is now thought that her boiler must have fetched away, and she fell off in the trough of the sea and went down before the boats could be got out.

LAKE FREIGHTS DULL AT KINGSTON.

KINGSTON, ONT.—Owing to the dullness of lake freights several schooners are making preperations to go into winter quarters. The schooner Grantham, owned by Donnelly Bros. has been laying at Kingston since September 8, waiting for something to do. As there are no prospects of anything turning up in the way of a paying freight, the vessel will be laid up. Capt. Crawford says this will be a very dull autumn. The coal dealers will not take in a larger stock than they necessarily require as they are assured coal will drop away down in the spring. Small tonnage will therefore seek winter quarters at an early date.

RECENT COLLISIONS.

Two serious collisions have occurred since our last issue, involving a great loss to vessel owners in the detention of their property during the most lucrative portion of the season, and in repairing the heavy damages sustained,

The most important casualty is that between the steel steamers Norman, of the Menominee Transit Line, and the Republic, of the Republic Iron Co. The latter vessel was bound down, loaded, and met the Norman, bound up, light, at 8.30 a. m., October 7, in Lake George. Owing to a sheer taken by the steamer City of Naples, the Norman closely avoided a collision with her, and the Republic following closely after the City of Naples, collided with the Norman nearly stem on, both vessels receiving nearly the same damage on the starboard bow, and necessitating the removal of about twenty plates. An estimate of the repairs on each vessel places the cost at about $5,000 each, and they are now in the hands of the Globe Iron Works Co., at Cleveland, being repaired with all possible dispatch.

Both steamers were built in 1880 by the Globe Iron Works Co. They are almost precisely the same size, the Norman registering 1870 and Republic 1874 tons, net, and they are each valued at $200,000. Both are fully covered with insurance. The Republic is commanded by Capt. J. A. Landfair, one of the best known and most experienced captains on the lakes. Capt. S. Stratton sails the Norman. He is a young man, but has an excellent reputation for care and good judgment, and in this connection the chief engineer of the Norman, Mr. Clement Clark, of Sandusky, who is also a young man, is given great credit for the skillful and smart handling of the steamer's engines previous to and after the collision. The redeeming feature of the casualty is that there was no loss of life, although some reflections are cast upon the niggardly policy of Congress in not granting appropriations commensurate with the importance of northwestern commerce, as a cessation of Lake Superior transportation similar to the case of the Susan E. Peck was again narrowly averted at this point.

The next most important collision occurred last Thursday between the whaleback steamer Pillsbury, with flour from Gladstone to Buffalo, and the steamer Nahant, laden with iron ore from Escanaba. They collided off Poe's Reef, in the Straits of Mackinac. The Nahant was severely damaged, and barely reached Duncan City, where she sank in shoal water. The tug Favorite, of the Swain Wrecking Co., rendered valuable assistance to the Nahant, in towing her into port, and the crew of the Favorite, who are experienced salvage and wrecking hands, made an excellent job in placing a stout canvas jacket, well secured, from abreast the boilers on the starboard side, around aft, and well along on the port side also. The Nahant was then pumped out, and the Favorite proceeded on with her to Cleveland, where she arrived, all well, on Wednesday morning. After discharging her cargo of iron ore she will be surveyed for final repairs, which will no doubt cost a heavy sum.

The Nahant is a wooden steamer of 1200 tons burden, under command of Capt. Thomas Jones, who is also part owner. She was valued at $38,000, and carries $28,500 insurance, the one-fourth interest owned by Mr. James Wallace, of the Cleveland Ship Building Co. not being insured. The collision was caused by the wheel chains of the steamer Pillsbury parting when both steamers were running side by side off Cheboygan, bound down.

FLOTSAM, JETSAM AND LAGAN.

Captain Patrick Ryan dropped dead in the state-room of the steam barge John E. Hall when on Lake Huron, Saturday night. The Hall put into Alpena and the remains were sent to Detroit by rail.

The steamer E. C. Pope is chartered for 125,000 bushels of wheat from South Chicago. This is the largest grain cargo ever carried on the lakes.

The wreckage seen by those on board the steamer Lyon, near Whitefish Point, was probably from the steamer Frank Perew, which was lost about a year ago.

The last shipment of stone for the season has been made from Kelley's Island for the Sault canal. Over 14,000 cubic yards, making fifty-six cargoes have been sent up.

Captain Foote, of the steamer United Empire has the distinction of bringing the first Canadian vessel through the Sault Ste. Marie river during the night since the new range lights have been placed.

John Karcher and Henry Law, of Sandusky, have purchased of W. H. Herbert and others the steamer Schnoor, the consideration being $5,000. She is now at Sandusky, and will be put into shape for business.

The whaleback steamer Mather brought down 116,500 bushels of corn from Chicago. A Chicago paper had it that the Thomas Wilson, which is of the same build, could out-carry the Mather, but Capt. Smith declares that the Mather is good for 1,500 bushels more than the Wilson.—*Buffalo Express.*

The new whaleback steamer, James Colgate, recently launched at West Superior, is a duplicate of the Wilson and Mather and is 300 feet long, 34 feet wide and 24 feet beam. There will be three more launches at West Superior this year, including the whaleback passenger boat for the World's Fair.

Bearinger & Sibley's big raft of 9,000,000 ft. taken care of on Lake Huron during the northeast gale of last week, by the tugs Sea Gull, Smith and Parker, is the record tow of the lakes, and if loaded on large, full-rigged ocean ships, would take about nine of them to carry it. This represents the greatest economy of floating transportation, only possible on large sheets of protected waterways like the lakes afford.

Relative to the complete navigation through Canadian territory to the Gulf of St. Lawrence it is interesting to note that last week the Calvin Company's raft No. 15, in tow of the steamer Traveller, Capt. Ephraim Martin, passed down the Canadian channel, skirting Fiddler's Elbow, passing north of Grenadier Island, and continuing on her way to Brockville without leaving Canadian waters. This has an interesting bearing on the recent discussion regarding the navigability of the channel mentioned.

Captain McAllister, of the Dominion steamer Alberta, receives with but poor grace the statement published last week relative to the E. C. Pope walking past him on the trip from the "Soo" to Duluth. He says the Alberta was loaded and had to proceed slowly until well out of the "Soo" river; this gave the E. C. Pope a start of several miles, and for the remainder of the trip the Pope, in light ballast trim, ought certainly be expected to hold her own against the Alberta, loaded down to 14 feet, 6 inches.

PERSONAL.

Mr. E. M. Peck, of Detroit, Mich., was a Weddell House guest at Cleveland on Thursday.

Mr. Harvey D. Goulder, admiralty lawyer, returns to Cleveland to-day after an absence in Cincinnati during the past week.

Capt. Sullivan representing David Vance & Co., of Milwaukee, visited Cleveland this week on vessel and insurance business.

Mr. James J. Clark, vice-president of the Detroit Fire and Marine Insurance Co., visited Cleveland on Tuesday on underwriters' business.

Capt. James Millen and A. A. Parker, principals of the firm of Parker & Millen, Detroit, spent Wednesday in Cleveland on vessel business.

Mr. Luther Allen, Secretary and Treasurer of the Globe Iron Works Co., left Cleveland on Wednesday on a visit to New York. He is expected to return on Saturday.

Mr. Richard Rispin, of the firm of P. H. Fleming & Co., Chicago, was in Cleveland on Friday on business connected with the Sun Insurance Co., of San Francisco, for which his firm are the agents.

Capt. F. D. Herriman, of Chicago, Chief Inspector for the Bureau Veritas, expects to visit Cleveland in the interests of his company in a few days. Capt. Herriman was formerly a shipbuilder in Liverpool.

Rev. B. W. Daugherty, of Huron, O., passed through the city on Monday en route to Baltimore, Md., to attend the Protestant Episcopal church convention, now in session there. Mr. Daugherty was detained at Huron after the opening days of the convention attending the last sad rites over the body of Captain Myers.

MARITIME LAW.

SUN INS. CO. VS. THE HOPE.—MARITIME LIENS—INSURANCE PREMIUMS.

(District Court, D. Washington, N. D., Feb. 11, 1892.)

Under the general maritime law, there is no lien on a vessel for marine insurance premiums due from her owner.

In Admiralty. Libel by the Sun Insurance Co. against the bark Hope, etc., to recover insurance premiums. Heard on exceptions to the libel. Sustained.

Hanford, District Judge. This is a suit *in rem*, to recover the amount of a premium for marine insurance issued to the owner of the vessel libeled. The claimant has filed exceptions to the libel on the ground that there is no lien to suppopt process *in rem*, and the court is without jurisdiction. There is no statute giving a lien for insurance premiums in this state, and whether such a lien exists under the general maritime law is a question upon which I find a conflict of authority. But a majority of the cases, and I think the weightier decisions, affirm that insurance for the personal benefit of an owner is not essential to render a vessel seaworthy, or an aid to navigation, and there can be no reason for giving credit to the vessel for such expense; therefore, the lien does not exist. Henry, Adm. p. 130; The John T. Moore, 3 Woods, 61; The Jennie B. Gilkey, 19 Fed. Rep. 127; The Waubaushene, 22 Fed. Rep. 109; note to The Dolphin, 1 Flip, 580. I hold to this view, and will sustain the exceptions.

SALVAGE—FIRE ON BULKHEAD—REASONABLE APPREHENSION OF DANGER—EXCESSIVE SECURITY REQUIRED.

U. S. District Court, Southern District of New York.

Fire broke out in a building near a bulkhead, within 40 or 50 feet of which lay the barkentine John Swan. Two tugs came up and were requested by the only person on the ship to tow her into the stream, which was done, and one of the tugs remained with her, as her anchor dragged. About the time the fire broke out, the fire boat arrived; the event proved that the fire was carried away from the ship, and that there had been no absolute necessity for him having been hauled into the stream. Held, that at the time the service begun, there was such reasonable apprehension of damage as made it proper to remove the ship; that the service, therefore, was a salvage service, though of small merit, and $125 was awarded to one tug and $75 to the other, costs being refused to any tug, because they had exacted security in the sum of $5,000. BROWN, J.

The claimants contend that the vessel was in no danger, and that the service was of no value. The witnesses for the Peck affirm that smoke and sparks were flying about the vessel. The claimants contend that this is a gross misrepresentation; their testimony is, that at least from half an hour after the tugs arrived when their witnesses were on the scene, the wind was setting up river and on shore, so as to carry any fire sparks away from the ship. The fire extended two blocks to the northward, and not at all to the southward. A line of loaded cars, which was on the wharf running parallel with the ship, at a distance of about 35 feet from her, was not removed during the fire, and the cars were not damaged. About the time the tugs were hauling the ship out of her berth, the city fire boat came up river, and, waiting below until the ship was hauled out, then went into the slip and remained there several hours, playing upon the fire until it was subdued, her stern occupying a part of the berth in which the ship had been before.

Whether the service is a salvage one or not, is not to be determined by what is ascertained or judged after the event. It is enough that at the time the service is rendered, the vessel is in a "situation of actual apprehension, though not of actual danger;" The Raikes, 1 Hagg. 247; see The Alaska, 23 Fed. Rep. 597, 607 and 608, and cases there cited. At the time this service was begun, I have no doubt that the removal of this vessel was a proper and necessary act; not in the sense that there was a certainty of danger or loss, but such a reasonable apprehension of danger as made it prudent to remove her. That was requested by the watchman, the only person in charge. It could not then be known how fiercely the fire might rage, or how much it might spread along the bulkhead or the wharf. The fire boat, it is true, appeared on the spot before the ship got out into the stream, and it is now seen that it would have been quite sufficient had the ship been merely hauled out to the end of the wharf and made fast there. The presence of the fire boat inside the slip, and between the bulkhead and the ship, would have been a complete protection from danger, as the captain of the Quaker City stated. While these circumstances do not deprive the services of a salvage character, they make it one of small merit. It involved no difficulty or danger to the tugs; the service was short, except that the Peck lay by, as was proper when the anchor was dragging. The damage to the Swan and the loss of ropes and some other particulars in the service testified to amounted to $84. Taking all these circumstances into account, I think $125 to the Peck and $75 to the Quaker City will be a sufficient award for the services rendered. But as the claimants were required by the Peck to give security in the grossly excessive amount of $5,000, I do not award her costs. April 26, 1892.

SERVE'S RIBBED STEEL BOILER TUBES.

An order for 7,500 of the Serve's ribbed steel boiler tubes for a large steamer has just been placed with Chas. W. Whitney, 81-83 Fulton street, New York, sole agents for the manufacturers of the ribbed tubes in the United States and Canada. In addition to this recent order, it is learned that the Pennsylvania railway and Grand Trunk railway, of Canada, after some close experimental tests, have also placed orders for these ribbed tubes, and it seems but a question of time when the ribbed tube will supersede the plain one entirely.

In this connection some comparative figures have been obtained from the manufacturers, showing the internal heat-absorbing surface of plain and ribbed tubes, which appears to settle the question of economy or increased capacity by the use of ribbed tubes in preference to plain ones.

Even among professional men, whose calling necessitates a greater or less knowledge of the principles of heat, it seems difficult to realize, in all its fullness, the dependence of the heat-transmitting capacity of boiler tubes upon their power to absorb heat. It goes without saying that it is not possible for a tube or anything else to transmit more heat than it absorbs, and it is because the plain tube has so much less heat-absorbing surface than the ribbed tube that the latter has so much more heat to distribute. The average increase of the heat-absorbing surface of ribbed over plain tubes is in the neighborhood of 90 per cent., but it does not follow that the whole of this difference will be realized in the generation of steam. In fact, it is not, the experiments thus far having proved that the economy or increased steaming capacity averages all the way from 10 to 40 per cent., varying with the description of boiler and with the conditions under which the boiler is used.

Compartive internal heat-absorbing surface in "square feet per foot of length," of plain and ribbed steel tubes of thicknesses named (which are the lightest they can manufacture the ribbed) taking as basis for the ribbed the inside circumference and both sides of ribs. Also comparative areas in "square inches" for the passage of the gases after deducting section due to the ribs, and the approximate comparative weight per foot of length.

Internal Heat-Absorbing Surface in square feet per foot of length.				Areas in Square inches for passage of gases.		Comparative weight per foot of length in pounds.		
O. D. and Gauge.	Plain.	Ribbed.	Increase of Ribbed.	Plain.	Ribbed.	Plain.	Ribbed.	Increase of Ribbed.
2 x 13	0.47			2.556		1.91		
2½ x 12	0.60	1.08	80%	4.094	3.576	2.77	4.55	64%
2¾ x 11	0.66	1.28	94%	5.039	4.290	3.40	5.69	67%
3 x 11	0.73	1.43	96%	6.083	5.251	3.72	6.27	68%
3¼ x 11	0.79	1.50	90%	7.125	6.388	4.04	6.58	63%
3½ x 11	0.85	1.65	94%	8.357	7.546	4.37	7.16	63%
3¾ x 10	0.92	1.70	85%	9.687	8.739	5.16	7.93	54%
4 x 10	0.97	1.85	90%	10.992	10.084	5.51	8.54	55%

According to practically applied engineering rules, the water surface of tubes gives out or distributes heat fully thirty times as quickly as the internal surface absorbs it, under the usual conditions in boilers.

The bare statement of this fact will dispose of an objection which has occurred to some not familiar with it, viz.: that the external surface of ribbed tubes is not adequate to distribute the increased heat absorbed by the addition of the ribs.

SEPTEMBER TRAFFIC THROUGH ST. MARY'S FALLS CANAL.

The September traffic through the St. Mary's Falls canal shows a falling off from the previous month's record of 111,428 tons. This is attributable to the usual decrease of the fall trade to and from Lake Superior. The itemized detail of freight as furnished from the office of Gen. O. M. Poe, is as follows:

	EASTBOUND.	WESTBOUND.
Coal		363,673 tons.
Flour	755,802 bbls.	120 bbls.
Grain		16,660 bu.
Corn	425,476 bu.	
Wheat	3,993,318 bu.	
Building stone	6,702 tons.	
Copper	8,628 tons.	
Manufactured iron		12,802 tons.
Iron ore	812,153 tons.	
Iron, pig	9,525 tons.	
Salt		27,544 bbls.
Lumber	96,080 M. ft.	
Silver ore	290 tons.	
Unclassified freight	15,743 tons.	46,277 tons.
Passengers	1,497	1,472

The total east-bound freight amounted to 1,233,403 net tons; westbound, 427,900 net tons; total freight traffic, 1,661,303 net tons. The total number of passengers was 2,969, showing only 25 more eastbound than traveled west via. the canal.

The Secretary of the Treasury has appointed William H. Shields keeper, and Joseph A. Martin, first assistant keeper of the light station at Squaw Island, Mich.

TREATMENT OF FROST BITES.

AS RECOMMENDED BY THE SURGEON-GENERAL OF THE MARINE HOSPITAL SERVICE.

1. Do not bring the patient to the fire, nor bathe the parts in warm water.

2. If snow be on the ground, or accessible, take a woolen cloth in the hand, place a handful of snow upon it, and gently rub the frozen part until the natural color is restored. In case snow is not at hand, bathe the part gently with a woolen cloth in the coldest fresh water obtainable—ice-water if practicable.

3. In case the frost-bite is old, and the skin has turned black or begun to scale off, do not attempt to restore its vitality by friction, but apply carron oil on a little cotton, after which wrap the part loosely in flannel.

4. In all cases, as soon as the vitality has been restored, apply the carron oil, prepared according to service formula. As it contains opium, do not administer morphia or other opiate.

5. In the case of a person apparently dead from exposure to cold, friction should be applied to the body and the lower extremities, and artificial respiration practiced, as in cases of the apparently drowned. As soon as the circulation appears to be restored, administer spirit and water at intervals of 15 or 20 minutes until the flesh feels natural. Even if no signs of life appear, friction should be kept up for a long period, as instances are on record of recovery after several hours of suspended animation.

Carron oil—(Service formula): Olive-oil or linseed-oil (raw); lime-water, of each 12 parts; tincture of opium, 1 part. Mix.

PROPOSALS.

U. S. ENGINEER OFFICE, 121 Franklin Street, Buffalo, N. Y., October 15, 1892. Sealed proposals for extension of breakwater and for building 1600 feet of the shore arm at Buffalo, N. Y. will be received at this office until 2 p. m. November 15, 1892, and then publicly opened. Specifications, blank forms and all available information will be furnished on application to this office MAJOR E. H. RUFFNER, Corps of Engineers. 13-3

U. S. ENGINEER OFFICE, 121 Franklin street, Buffalo, N. Y., Oct. 15th, 1892. Sealed proposals for hire of dredge, drill boat, tug, derrick scow and for excavation of material in the Niagara River, N. Y., will be received at this office until 2 p. m., November 15th, 1892, and then publicly opened. Specifications, blank forms and all available information will be furnished on application to this office. MAJOR E. H. RUFFNER, Corps of Engineers. 13-3.

U. S. ENGINEER OFFICE, HICKOX Building, 185 Euclid avenue, Cleveland, O., September 30, 1892. Sealed proposals for extension of breakwater at Cleveland Harbor, Ohio, will be received at this office until 2 o'clock, P. M., of Thursday, October 20th, 1892, and then publicly opened. Specifications, blank forms and all available information will be furnished on application to this office. JARED A. SMITH, Lieut. Col., Corps of Engineers, U. S. A. 13-20

U. S. ENGINEER OFFICE, HICKOX Building, 185 Euclid avenue, Cleveland, O., September 30, 1892. Sealed proposals for removal and rebuilding of piers at Ashtabula Harbor, Ohio, will be received at this office until 2 o'clock, P. M., of Thursday, October 20, 1892, and then publicly opened. Specifications, blank forms and all available information will be furnished on application to this office. JARED A. SMITH, Lieut. Col., Corps of Engineers, U. S. A. 13-20

U. S. ENGINEER OFFICE, HICKOX Building, 185 Euclid Avenue, Cleveland, Ohio, September 20, 1892. Sealed proposals for dredging in straight channel, through Maumee Bay, for Toledo, Harbor, Ohio, will be received at this office until 2 o'clock, p. m., of Saturday, October, 15, 1892, and then publicly opened. Specifications, blank forms and all available information will be furnished on application to this office. JARED A. SMITH, Lieut. Col., Corps of Engineers, U. S. A. 3t.

JEFFERSONVILLE, IND., OCTOBER 1, 1892. Sealed proposals, in triplicate, will be received here until 11 o'clock a. m., (central standard time) Tuesday, the 1st day of November, 1892, for furnishing at the Q. M. Depot here 100,000 gallons of Mineral Oil, of 135° flash test, in cases of two five-gallon cans each. Government reserves right to reject any or all proposals, and to accept the whole quantity or any portion of the mineral oil bid for. All information furnished on application here. Envelopes containing proposals should be marked "Proposals for Mineral Oil," and addressed to COL. HENRY C. HODGES, Assistant Quartermaster General, U. S. Army, Depot Quartermaster.

NICARAGUA CANAL.

WHY THE UNITED STATES SHOULD BUILD IT.

The resolutions adopted by the St. Louis Convention, pointed out the advantages of this canal and urged its construction, ownership and control by the American people rather than the English, French or any other nation. It says that the only feasible route for such a canal is by way of Nicaragua, and points out that the two great political parties have endorsed the project.

Engineers have agreed in expressing a decided preference for the Nicaragua route, because, among other reasons, only 26¼ miles of the entire distance of 169½ miles from the Atlantic to the Pacific ocean through Nicaragua will have to be excavated. The other 142¼ miles consist of Lake Nicaragua, the San Juan river and depressions in the surface of the earth. Lake Nicaragua will constitute a harbor sufficient to accommodate the navies and commerce of the world. It is 110 miles long, 60 miles wide and is 250 feet at its deepest points. Vessels entering the canal from the Atlantic ocean will sail on a level with the ocean for 12¾ miles, at the end of which they will be raised by three locks to the level of the lake. They will sail along the San Juan river and the lake on the lake level to a point within three and one-half miles of the Pacific ocean. Here they will be lowered by the locks to the level of the Pacific ocean.

The committee says the cost, including the payment of interest during the progress of the work, will be less than $100,000,000, and the time required for the completion of the work is within five years. The climate of Nicaragua is healthy, and out of 1,600 northern men employed in constructing a railroad through the swamp only two died during a period of four months. Of 200 northern engineers and skilled mechanics who have worked for the canal company for three years not one has died from a disease incident to the country. By the Nicaragua canal the distance saved is shown by this table:

Routes Between the Following Ports.	Miles Present Route, via	Miles via Nicaragua Canal.
New York and San Francisco	Cape Horn 15,660	4,907
New York and Puget Sound	Magellan. 13,935	5,665
New York and Hong Kong	Cape Horn 13,750	10,695
New York and Melbourne	Cape Horn 13,769	9,882
Liverpool and San Francisco	Cape Horn 15,620	7,627
New Orleans and San Francisco	Cape Horn 16,000	4,147

The wheat crop of the Pacific coast in 1891 was over 1,800,000 tons and 80 per cent of the wheat was exported by sailing vessels, and a large proportion of it passed around the Horn. The Nicaragua Canal by shortening the route to Atlantic ports would not only save the producer cost of freight but the revenue of the canal at $2 per ton toll would be nearly $3,000,000 on wheat alone. It is shown that there are 500,000,000 thousand feet of merchantable timber in Washington and Oregon to the value of which over $2 per thousand feet would be added by cheap water transportation via the Nicaragua Canal. The fruit industry of California would quadruple in two years from the opening of the canal for business and fast refrigerator steamers would deliver fruit from California to New York in 10 days, to Liverpool in 14 days, and to New Orleans in 8 days. The cotton growing sections of the gulf states have undergone a depression, and the committee believes that nothing could be of greater immediate advantage than the canal in relieving that depression, and making a market for American cotton in Japan, China and Corea, where already the people are beginning to manufacture cotton goods by machinery. Japan imported over 7,000,000 pounds of American cotton in 1891, most of which was shipped from New Orleans to New York and then by rail to Vancouver and steamship to Japan.

The Suez Canal, it is shown, saves only 3.600 miles around the Cape of Good Hope, as against over 10,000 miles saved by the Nicaragua Canal; and the following table shows the number of ships passing through, the net tonnage and the gross receipts of the Suez Canal for six separate years:

Year	No. Ships.	Net Tonnage.	Gross Receipts (Francs).
1870	488	436,600	4,345,758
1875	1,404	2,009,984	26,430,750
1880	2,026	3,057,421	36,492,620
1885	3,624	6,335,752	60,057,259
1890	3,389	6,853,637	68,983,500
1891	4,200	8,699,020	83,421,504

The tonnage tributary now to the Nicaragua Canal, and which would pass through after its opening, is over 6,000,000 tons a year. At $2 per ton, the charge made by Suez Canal, this would be $12,000,000 in tolls. The cost of operation and maintenance is placed at less than $1,000,000, and 6,000.000 tons would show a net income of $11,000,000 per annum. The committee is confident that within five years the income will be over $20,000,000.

The committee says it is no longer a question whether the canal will be built or not. The only question is as to who shall build it, and who shall control it when built? It believes the United States cannot afford to permit an enterprise of such magnitude and of such far-reaching advantage to pass under the control of any foreign company.

A PECULIAR QUESTION OF LAW.

In July, 1862, Congress passed a law permitting aliens who have served in the United States army to become citizens without complying with the law concerning the years of residence. Judge Hatch, of the Superior Court of Buffalo, in a case before him, has decided that it does not extend to the navy, but suggests that fairness requires remedial legislation. In his opinion, Judge Hatch says: "To my mind, no logical reason can be assigned on the merits of service for discriminating between men who have served in the navy and those who have served in the army. The service here shown was not rendered during the war, but the language of the statute is, 'who has enlisted or shall enlist,' so the privilege still exists." But two decisions on this question have found their way into the books, and these are conflicting.

CREDIT THE MAIL SUBSIDY BILL.

The steamship Alliance, of the United States and Brazil Steamship Co., has sailed from New York on her first direct trip to Montevideo and Buenos Ayres. Under the new subsidy provision of the Dingley shipping bill, this line has established direct mail and freight service to the Argentine Republic. The mail is carried under the fourth class, and is worth about $8,000 a trip to the company. Formerly all mail and freight were carried in sailing vessels and English tramp steamers, and at Rio Janeiro, Montevideo and other South American ports letters had to be carried off in the bay by private persons and placed on board the ships for transmission via. England or European ports. This national beneficent measure is to be credited solely to the mail subsidy bill. The steamer will sail every two weeks, and stop at Brazilian ports on their return trip.

NEW REVENUE CUTTER.

When bids were opened, some time ago, for the construction of a new revenue cutter, to be named the Calumet, for service at Chicago, the contract was awarded to the Union Drydock Co., of Buffalo, the lowest bidders, at their bid of $36,675. Subsequently this company withdrew, on account of the necessity of doing the work under the eight-hour law, which had not been passed when they made their estimates. The next lowest bidders were David Bell, of Buffalo, and Charles Reeder & Sons, of Baltimore, each firm having bid $38,500. Correspondence was then entered into with these two firms, and Secretary Foster decided to award the contract to David Bell, as he would deliver the boat in Buffalo, while Reeder & Sons offered in their proposals to deliver her in Baltimore. The extra expense involved in taking the boat to Chicago from Baltimore made the Buffalo firm practically the lower bidder.

NAVAL DEMONSTRATION AT CHICAGO.

The United States Marine Corps will be represented at the dedication ceremonies at the opening of the World's Columbian Exposition, in Chicago, October 21st. Colonel Heywood, commandant of the corps, has perfected arrangements for the detail of 200 marines, with twelve officers and the Marine band, for that event. The 200 marines will comprise men who happen to be concentrated in New York, in consequence of the police duty required of them at the cholera quarantine station at Sandy Hook and the Columbian celebration, which took place this week. They will leave New York for Chicago on the 17th inst. On the same day the Marine band will also leave for Chicago, in charge of Professor Smith. This force will be a valuable addition to the naval pageant present at the dedicatory celebration.

AMERICAN SAILORS AND AMERICAN SHIPS.

The following from a correspondent of *Engineer*, New York, has the true ring about it:

"Great stress is laid on the science of navigation, and credit is given to the captains of foreign steamships by our newspapers and anglomaniacs, but this fulsome flattery is simply ridiculous when they are called the greatest of navigators.

Navigation, though considered a science, is a simple fact, and to master it only the fundamental rules of mathematics and the tables formulated by Professor Bowditch (who was not a navigator) are necessary. These are easily acquired; as evidence of this there are thousands of men who circumnavigate the globe, and to every clime, whose names are never heard in public print, one class of men in particular—the hardy whalemen. But this flattery of foreign ship-masters is of late date, and only for those who steer a straight laid down course for four days between Cape Clear and Cape Race. This country is full of native navigators, worthy sons of honored sires. Let our legislators stop their penny wise and pound foolish policy, their saving at the spigot and wasting at the bunghole, and give to American vessels the same fostering care given by other nations. There is no fireside but what is indebted for its welfare to the labor in furnishing the raw and manufactured material used in constructing and furnishing the mercantile vessels, and there is no industry but what will be stimulated by a restoration of commerce."

TWIN SCREW VS. SIDE WHEELS.

What has for some time past been admitted by the most advanced ship builders, viz.: the superiority of twin screws over side wheels in deep water propulsion, has just been ably demonstrated over a 56-mile course.

The agents of the Fall River line recently sent a challenge to the New Haven line to test the speed of their fast boats. The challenge was accepted, and it was decided the race should be between a point near Stratford shoals and Fort Schuyler, a distance of 56 miles. The boats were placed stem and stern, and for the first fifteen minutes neither seemed to gain an inch on the other. Finally the Richard Peck began to forge slowly ahead. Gradually the distance between the two boats increased, and at last the Puritan was left astern, the Richard Peck gaining a mile and a half on the run. The Puritan is a side wheeler, one of the largest floating Sound palaces, and the Richard Peck is the first screw boat to go in service on the Sound. She was built on the Delaware and has been in service a month. The race was considered a fair test between the different systems of marine machinery and the relative qualities of the compound beam engine that goes with side wheelers and the modern triple-expansion engine that drives the twin-screw propeller.

AN OCEAN PICNIC.

A number of New Yorkers are about putting into practice, on an extensive scale, something which has been frequently talked of, but never came near being practically realized. The scheme is to embark on a gigantic round-the-world picnic, lasting for seven months, the participants to be limited to 160.

This floating club will be managed strictly on the Republican plan, all questions being decided by majority rule carried out through a committee of seven, chosen by ballot once a month by the passengers, the women's votes being just as good as those of the men. The captain will have no more to say about where the steamer shall go or how long it shall stay at any place than would the captain on any private yacht.

The stormy voyage across the Atlantic will be avoided by starting southward from New York and touching first at the Bermudas, and thence across to the Azores, which islands are both seen at their best in January.

Spain and Portugal will be visited next and then the line of advance will be through Gibraltar and along the North African coast, with stops more or less extended at Algiers, Tunis, across to Malta, and then back to Alexandria, Port Said, Cairo; through the Red sea to Aden, and thence on the Indian ocean to Bombay, Ceylon and Penang, from thence to Hong Kong, Shanghai and Yokohama, with many stops on the way. Three months will be occupied by this portion of the cruise, and it will be fully occupied. At every place of interest guides and interpreters will be furnished free of charge.

It is proposed to make quite a stay in Japan, so that any of the passengers who desire to do so can travel into the interior, while others remain on the vessel and cruise about the island from port to port, picking up their companions at a time and place agreed upon. A similar arrangement will probably be made in other countries.

The steamer chartered for the cruise—and it will be a large one, not less than 3,500 tons—will start westward from Yokohama, returning on its new course by the way of the Straits of Malacca, stopping at Madras, Calcutta and other places of interest in the East Indies not visited on the eastern trip, and then on through the Red sea to Constantinople and Athens.

This brings the party back into Europe, and a wide choice will be offered them as to the way of passing the first two months. Italy will be done first, with rests at Naples and Rome and opportunities for inland trips as explained in speaking of Japan. It is probable the steamer will be left by the majority after Italy has been seen, and a railway journey taken through Russia, Germany, Denmark and on to Sweden and the midnight sun. In any event, the vessel, with such passengers as choose to remain on her and all superfluous baggage, will proceed to Southampton, where it will be joined by the expedition toward the close of August, and sail for New York in time for the World's Fair.

And now comes another feature which is unique. As soon as the ship stops every man and woman among the passengers receives a sum of money, cash down, at the rate of $4 a day out of the general fund for the time they will remain in port. This sum is allowed them for pocket money or expenses, and they may spend it or not, as they please. Those who use the ship as their hotel will save money at such times, while those who do not may have to spend more than the allowance.

The tickets are to cost $3,250 each, so that the total amount invested will represent $520,000. or an average of $173,333 for thirty weeks, apportioning a little over $108 per week to each picknicker.

The Marine Record,

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CLEVELAND, O., OCTOBER 13, 1892.

AT this time, when Lake Superior freights are expected to become renumerative, a shoaling of water at the St. Mary's Falls canal is likely to take "all the gilt off the gingerbread." The water has been down this week to 14 feet 4 inches, and for the larger class of tonnage this is a ruinous draft to load to. Either better freights or more water is wanted, right smart!

IN the list of "Insurance and Classification Bureaux of the World's Shipping," published in our issue of September 29th, the United States Standard Steamship Owners' Builders' and Underwriters' Association L'd was inadvertently omitted. This register of iron and steel vessels are surveying a large number of steamers, and rules for the classification of wooden lake built vessels are now being compiled by a committee of shipbuilders, according to the plans adopted at the recent meeting held at Detroit.

Mr. Rufus K. Winslow whose obituary appears in another column of this issue, was one of the oldest and best known vessel owners of Cleveland, O. For three score years Mr. Winslow had been actively engaged in the vessel business and his family at one time owned the largest fleet and were the most enterprising shipping people on the Great Lakes. The resolutions passed by the Lake Carriers Association are endorsed by all who enjoyed the acquaintance of the departed shipowner, and his many estimable qualities, now withdrawn from the marine interists of Cleveland will cause a void which will be felt for many a day.

IT is well known that many lake steamers necessarily undergo some cheerful pounding from time to time. With the attention given to the hull when occasion demands, it is thought that all effects or defects are thereby compensated and the ship may proceed again about her business. There is another important feature comes in after a vessel has thumped over a shoal place and one which has been generally overlooked, that is, the effect which pounding has on the compass. It is now learned that after stranding, and in some cases, after an ordinary pounding over a shoal place, masters have found their compasses knocked out of adjustment and that they remained so for some time afterwards, finally working back to their former deviation. This feature in iron and steel vessels, especially, is a plausible one, and is entitled to the closest attention from masters and pilots on the lakes.

THE United States ought certainly to control the Nicaragua Canal when it is completed. All interests are free to admit that the feasibility of the construction of the Nicaragua Canal is beyond question. The cost of the work is estimated at $100,000,000, and it is thought that the canal when finished will show a net annual income of $11,000,000. It is not necessary that a repetition of the English policy carried out after the construction of the De Lesseps Suez Canal project should intervene in the future management and control of the Nicaragua canal, whereby the United States would be called upon to disburse a much larger amount than is now required to complete the work. European syndicates have already made overtures to the canal company, but the United States cannot afford to permit an enterprise of such magnitude and of such far-reaching advantage to pass under the control of any foreign company. There is undoubtedly a great deal in the argument that it behooves us as a nation conscious of the power to wield and of the greater influence we may exert upon the destinies of this continent to adopt the best means of securing the early completion of this work, whose advantage we are willing to share with the world but whose control should never be allowed to pass out of our hands.

THAT EIGHT-HOUR LAW.

The eight-hour law, passed by the last session of Congress, is evidently being enforced on all government contracts according to the strict rendering of the legislative act. This, in so far as it goes, is highly commendable, and the voice of the nation embodied as it should be in well considered legislative enactments must clearly be lived up to, until the law is repealed or otherwise becomes inoperative.

It is somewhat singular, however, to note that the eight-hour law is not being widely heralded at this time by the Federal departments in their requirements for bids on government work and supplies; furthermore, there seems to be a decided inclination to let the contractors take care of themselves in the proposals submitted for departmental contracts. Certainly the United States Attorney General is in no haste to limit or circumscribe the exact boundary over which contractors may not step in the execution of their work. In shipbuilding circles on the lakes, the Union Drydock Co., of Buffalo, N. Y., has been the first to feel the pressure in respect to the eight-hour law, and the consequence has been that, rather than comply with the eight-hour clause (a feature which had not entered into their calculations when bids were submitted) their contract to build the revenue cutter Calumet, for service at Chicago, is now cancelled.

In view of the fact that the Lighthouse Board is engaged upon the plans of several vessels intended for service on the lakes, it is of the utmost importance that lake shipbuilders should bear in mind the eight-hour clause in submitting proposals, so that in the event of the departmental system of labor being made compulsory, the builders might protect themselves at any stage of the construction.

Just how the river and harbor work, such as dredging, building and repairing piers, breakwaters, etc., where work can only be carried on during moderate weather, is to be ruled upon, rests, we presume, if the question is raised, with the Attorney General, but, with the present understanding of the law, if the eight-hour labor day is exceeded on any government contract, the work is being done in an illegal manner, and those who violate the law even as participants or accessories subject themselves to the prescribed penalty. It matters not that the contract has been awarded by the measure, material or workmanship, eight hours only may be consumed each day till the completion of the contract, and any infringement of the law can no doubt be summarily dealt with.

It is not our province or desire to point out how far-reaching is the application of this eight-hour law, only in so far as the contracting parties to a shipbuilding and equipment agreement might be amenable, and even this is enough to carry a Philadelphia lawyer out of his depth. However, it may be fairly assumed that all material and workmanship entering into the construction and equipment of a government vessel is subjected to a strict understanding of the law as embodied in the eight-hour system of daily labor. Such being the case, it is evident that the plates rolled for the vessel, the timber ordered from the logging camps, the engines from their drafting to their mechanical completion, etc., etc., must be worked at for only eight hours per day, or the original agreement if not nullified is certainly vitiated. There must be a voluntary, moral and legal obligation assumed by the shipbuilder acknowledging that eight hours should constitute a day's work throughout the entire construction of hull and equipment, and anything less is an evasion of the strict letter of the law, bringing, if circumstances so transpire, a consequent train of evils and perhaps litigation in its wake.

It is not likely that departments of the federal service will endeavor to influence shipbuilders in the strict observance or otherwise of this law, only perhaps in so far as the actual construction on the stocks is concerned; hence, no complications need exist on that score, and the builder must otherwise protect himself against the effect of the law in so far as it may apply to other portion of the work performed for the government under the implied if not expressed limitations of daily labor.

GRAIN SHORTAGES.

The subject of grain shortages is again occupying the attention of vessel owners and the unsatisfactory rendering of the bill of lading clause, stating that "all deficiency in cargo is to be paid for by the carrier, and deducted from the freight, and any excess in the cargo to be paid for to the carrier by the consignee," has within the past few days been again ruled upon in Cleveland, in favor of the consignee, with the result, however, that an appeal from the decision was promptly taken.

Notwithstanding the apparent safeguards thrown around the shipment and delivery of grain cargoes, shipmasters are regularly being accused of barratry (for these shortage claims amount to nothing less) and owners are mulcted in a penalty for that which has no existence except in the printed or written clause contained in a bill of lading, and this too, without their knowledge or sanction, at times, of such an unjust and palpably fraudulent clause being inserted.

This feature of holding a vessel responsible for cargo which has never been put into her, seems to be an evil which can only be remedied by the adoption of a more qualified bill of lading. However well the system may be found to work on railroad lines, it will always be a bone of contention in transportation by water. No doubt the through shipment method of weights and measures seemed originally to be based on the best principles of ethics, and considered equitable to all concerned, as it would be, providing the ship could always deliver the quantity said to be given her, but the contrary is invariably the case, either in a shortage or an over-run. "So the burnt child squeals," and the wail is louder at each repetition.

The alternative is, of course, open to a vessel owner, of not accepting cargo under such an arbitrary bill of lading, but as it happens, boats are built to transport cargo, and they must have it; yet, this fact alone is no reason why they should be saddled with a juridical monstrosity and be denied the lenient rights of equity in cases of clearly assumptive shortages, nor can they be expected to deliver that which they never received, bills of lading to the contrary, notwithstanding.

The through bill of lading system, which apparently works without undue friction on the railroads, is not so agreeably worked under the conditions attending shipment by vessel, the change being notable in the bulk handled in the respective receptacles, viz., cars and ships, and as a proof of this, it is seldom that any litigation is entered into between the railroads and elevators on a grain shortage account. Judging, therefore, from the frequent attempts of vessel owners to secure a righteous decision in cases of assumed shortage, and the absence of such claims by the railroads, it is evident that the burden presses heavier on the one carrier than the other.

On general principles it should be denied that a vessel is responsible for a shortage in weights and measures, unless the act of barratry is charged against the master or crew, or that an agent can sign away the rights of redress in a well substantiated case of mistaken weights and measures. Further than this, the entire question hinges upon the merchandise being placed on board of the vessel, otherwise, the bill of lading is vitiated, if not fraudulent on the face of it. Thus, if we assume that there was more cargo on board than was specified in the bill of lading, and the owner should claim it as his own, without the consignee being allowed redress by showing a mistake in weights and measures, the principles of law and equity would be clearly violated, and it seems needless to state that even-handed justice requires an equal consideration under opposite circumstances.

IMPROVE THE ERIE CANAL.

It is gratifying to note that the state of New York has again awakened to the commercial importance of the canal which gives it access to the Hudson river and thence to the sea coast.

The union for the improvement of the canals of the state of New York has called a convention to meet in Buffalo, October 19, to which boards of trade of the cities of the state and other similar associations are invited to send delegates. The object is to give expression to popular opinion in favor of maintaining and improving the canals, to organize a strong permanent association, and to favor the formation of local organizations for the same purpose.

In 1792 the first act concerning the construction of the canals of the state of New York passed the Legislature, and the convention therefore will be in the nature of a centennial celebration, as well as an assemblage of men called to consider the canal system of New York. The enlargement of the Erie canal, the matter of transportation, and the proper system of maintenance will be discussed by men who are thoroughly conversant with the needs and advantages of artificial waterways.

While the present use of the canal is largely that of a check on the railroads, no improvements have been made, except minor ones, for the past 36 years, notwithstanding the fact that the railroads were compelled to carry grain to the seaboard, on account of the canal, at about one half their published tariff of rates. It is not generally known that the tonnage of the canal in the past twenty years was over 100,000,000 tons, and that for the last eight years nearly 15,000,000 bushels more of grain were sent into New York through the canal than by the combined transportation facilities of the many railroads and the coastwise and river vessels.

The port of New York last year received 30,000,000 bushels of grain by canal and 63,000,000 bushels by rail. The rate by rail to New York was 7 4-5 cents a bushel, but this figure was about cut in two during the navigation season and the full credit of saving about 3½ cents a bushel on the transportation of grain is due wholly to the canal; besides, when there is a rush of grain to the seaboard over and above what the railroads can handle,

the canal steps in and not only relieves the railroads, but also regulates to a certain extent the rates.

As an indication of the volume of trade through the canal, it is learned that in the month of July, 1889, the canal carried 4,664,450 bushels out of a total receipt at Buffalo of 8,753,920 bushels; this nearly equaled the carriage by rail. In 1890, out of a total of 11,719,610 bushels, the canal carried 7,320,590 bushels, only 3,730,914 being shipped by rail. In 1891, out of a total of 11,485,220 bushels, only 2,080,450 were shipped by canal, 7,952,493 going by rail.

In 1889 the canal carried 45.76 per cent. of the grain shipped from the elevators; the railroads carried 54.24 per cert., and the average rate for the month on wheat by the canal was 4 cents per bushel. Last July the canal carried but 28.28 per cent. and railroads 71.72 per cent. of the shipments, while the highest rate on wheat by the canal during the month was only 2 5-8 cents per bushel.

The Erie canal is an indispensabl factor in the commerce of the northwest, and well advised action endorsed by the convention will earn the gratitude of the vast grain interests centered there, and this too to the tune of from three to five cents a bushel for transporting their produce the last five hundred miles of the route to the seaboard.

DREDGE THE GUT IN LAKE GEORGE.

The recent collision in Lake George, between two large steel steamers, has set the vessel owners to thinking how this risk may be lessened and they have arrived at the conclusion that a certain amount of easy dredging will widen the channel. It would be somewhat difficult for three railroad trains forty feet wide to pass on paralle tracks only one hundred and twenty feet in the entire width, yet, this is apparently the situation in the locality where several collisions have taken place. Dredging operations released the jamb caused by the sinking of the Susan E. Peck, in nearly the same place, the Devereux, Wade, Couch, Sheldon, Helena and more recently the Republic and Norman have all tried to run over the clay bank with disastrous results and it is now time that a dredge got to work there. The entire risks are caused through a seeming lack of appreciation by Congress, of the immense north-western commerce forced to use this narrow gut, which, if any other seamen in the world were required to navigate with 3,000 ton boats, 300 feet in length, they would be simply appalled. The district is under the control of one of the best and most experienced officers in the corps of engineers and whatever remedial measures lie within his province commerce is sure of obtaining, an appeal has already been lodged in that quarter, though with what result can not yet be stated. An order to dredge is all that is required and this should be promptly issued before another 300 foot boat lays herself athwart the 150 foot gut and causes a cessation of all Lake Superior trade.

THE efficiency and economy shown by the steamboat lines employing a superintendent engineer on shore to look after the machinery of their fleet is beyond question. In the old days of sailing vessels a ships-husband was an acknowledged necessity, but the regime of tar, oakum, canvas and cordage has about passed away, and the marine superintendent of today is required to be a competent practical engineer with a degree of business aptitude and a knowledge of men and matters above the ordinary attainments. There are a hundredfold more reasons for the services of a shore engineer, of the right sort, on the staff of employes in a large steamship line than there ever was for a ships-husband in the bygone days. This fact is being more realized each succeeding year, chiefly, we opine, because of the large addition being annually made to the steam tonnage of the lakes. Be this as it may, there can be little doubt that in the short trade on the lakes the firms owning from three or four boats upwards would find it a paying investment to employ a superintendent engineer—always providing that the right stamp of a man is secured.

THE 400th anniversary of the discovery of the continent of America by Columbus has been widely hailed and commemorated this week at all lake ports. For residents on the shores of Lake Erie, Commodore Perry is the next on the venerated list.

CONTRACT FOR ENGINES AND BOILERS.

Wilson & Hendrie, proprietors of the Montague Iron Works, of Montague, Mich., have just closed a contract with the Sands & Maxwell Lumber Co., of Pentwater, Mich., for a fore and aft compound marine engine, 14 and 28 inch cylinders by 20 inch stroke. Also one marine boiler 7 feet in diameter by 12 feet long, to be placed in a new passenger steamer being built by the Grand Haven Ship Building Company, Grand Haven, Mich. The boat will be ready for business March 1st, 1893, and will run between Pentwater and Ludington, Mich.

OBITUARY.

RUFUS KING WINSLOW.

There has passed away from the midst of Cleveland's vessel owners during the past week a pioneer in the maritime and commercial history ot this port, one whose kind advice, technical experience and sage counsel helped many to steer clear of commercial bubbles and to hold fast to the legitimate channels of an improving industry.

Rufus K. Winslow's extensive business interests and close identification with the growth of this port made him widely known and respected. His plain, unassuming manner and sterling qualities won for him high esteem. In 1831 his father settled in Cleveland and bought land extensively, which became a wise investment and laid the foundation of the fortune he made. Rufus K. Winslow, upon attaining his majarity, became associated with his father and brothers, N. C., H. J. and R. G. Winslow, in the merchant marine business. The father retired in 1854. The Winslow fleet of ships was at that time one of the largest on the lakes, and in 1859 and 1860 the Winslow brothers despatched vessels to the Black sea and to other old world points, but for the most part their operations were confined to the chain of lakes, from which each amassed a considerable fortune.

During the past two years Mr. Winslow's health has been somewhat precarious and last winter he experienced so severe an illness that at times it was hardly expected that he would ever assume active business duties again. He pulled through all right, however, and for the past few months attended in a great degree to the handling of his fleet of boats. His usual courteous manner and upright conscientious dealings marked the true man, unwilling to take advantage and scrupulously

RUFUS KING WINSLOW.

exact in all business relations. Mr. Winslow attained the ripe old age of seventy-five years, and they were full of activity and experience. In 1869 he was elected president of the Kirtland Academy of Natural Science. He took a great interest in all forms of art and was a liberal patron of it, but his business as a shipowner caused him to watch narrowly the best interests of that community, and his counsel was invaluable in the formation and successful continuance of the late Cleveland Vessel Owners' Association, now merged into the larger body.

At a meeting of the Board of Trade the president made feeling and appropriate remarks on the death of Mr. Winslow and appointed Capt. Thomas Wilson, H. D. Goulder and Hon. George H. Ely a committee to draw up resolutions. They reported as follows:

"WHEREAS, One of our oldest members, R. K. Winslow, has been taken away by death after a long and useful life of business activity, in which, besides successfully conducting a large private business as a ship owner, he was a prominent figure, and his influence an important factor in every effort and measure for the commercial advancement of Cleveland and the lake commerce, upon which that advancement has been so largely dependent,

"*Resolved*, That the Board of Trade, deferring to a well-known sentiment of Mr. Winslow, place on its record these resolutions, as an expression of our sorrow and sympathy for the bereaved family, and as a simple testimonial of the respect and esteem in which we held the deceased."

A large number of ship owners and merchants attended the funeral of their late associate, which took place Monday afternoon, at 2 o'clock, from his late home, 708 Euclid avenue. Rev. Francis Mason Hall, rector of St. Mark's Protestant Episcopal church, officiated, owing to the absence of Bishop Leonard.

THE FREIGHT SITUATION.

The down freight market now depends entirely on grain for strength. The necessity for increased shipments of wheat and corn has, however, restored the rate at Chicago to 2½ cents on wheat to Buffalo, and at Duluth yesterday offers were made of 3⅞ cents, and the 4 cent mark will likely be reached to-day.

With all this, however, ore rates have failed to advance above last week's rates of $1.20 for Ashland and Two Harbors; $1 for Marquette and 75 cents for Escanaba tonnage, although better rates from Lake Superior ports are being talked of and may be paid within a few days.

The suspension of anthracite coal shipments, caused by the Buffalo strike of switchmen, is having its effect, and the knowledge that vessel men have of the large quantity that still remains to be shipped to Lake Michigan has forced rates up another 5 cents since last week. The rate to Chicago is now 70 cents, to Milwaukee 65 cents, and to Racine 75 cents. The shortage of cars and consequent scarcity of coal has kept soft coal rates, as a rule, unchanged, although a few special cargoes have obtained better rates.

Lumber carriers continue in better demand, with an advance of 25 cents from Bay City. The rate is now $1.75 from Bay City to Ohio ports and $2 to Buffalo and Tonawanda. The Saginaw rates are 12½ cents higher in each case.

LAUNCH OF THE STEEL STEAMER THOMAS MAYTHAM.

There was launched from the yards of the Chicago Ship Building Co., on Saturday the large steel steamer Thomas Maytham, named in honor of the well known vessel owner of Buffalo, who is also part owner of the latest competitor for lake favors.

The Maytham was commenced early in June, so that it has taken only about four months to construct the hull. Her general dimensions are 287 feet keel, 41 feet beam and 24½ feet depth of hold. Engines are triple expansion, by Trout of Buffalo, cylinders 19, 23 and 52 inches by 45 inch stroke, two Scotch type boilers from the Lake Erie Boiler Works of Buffalo and the "Providence" steam windlass and capstans are included in the modern equipment of this handsome new steamer.

A large party attended the launch which was conducted with the usual precision incident to launches superintended by Mr. W. I. Babcock, who is one of the most expert iron and steel shipbuilders on the Great Lakes. It is expected that the Maytham will secure a share of this season's business and active work will be carried on throughout her equipment.

THE BUREAU VERITAS LAKE DEPARTMENT.

INTERNATIONAL REGISTER OF SHIPPING.

CHICAGO, ILLS., Oct. 12, 1892.

To the Editor of The Marine Record:

I would thank you for space in your valuable paper for the following letter:

Since my arrival in Chicago some two weeks ago, I have read with much interest your several articles on the classification and insurance of lake vessels, and when I state that I am appointed by the Bureau Veritas at Paris, to represent them on the American lakes, you will understand how particularly interesting to me your statements have been on the importance of establishing a method that will give the true character and worth of the various type of lake vessels. Coming among you at a time when a change is considered necessary in the method of classing your lake vessels, I hope and trust I may be able to convince the lake underwriters, as well as the owners and builders of lake vessels, that in accepting the system established by the Bureau Veritas, with its rules and conditions fully set forth in its International Register of Shipping (now ready for distribution), they are laying the foundation of what can be made to all interested, a satisfactory class division for the lake vessels. The Bureau Veritas system of arriving at the true character and divisional worth of the various type of vessels, is, as you are aware, no experimental one, but of some seventy years' standing, acknowledged and accepted as the true principle of classification, not only by every sea-going American ship, but by the shipping interests of the world. I may here briefly state that the Register admits of three divisions and of seven navigation marks, viz.: I, inland navigation, referring to canals and rivers only; P, small coasting trade; M, Mediterranean trade; Y, yachts; G, great coasting trade; A, Atlantic trade; L, long voyage trade. The administration, who have long anticipated the addition of a lake division to their system, are now, that the lake tonnage has increased to such an extent, anxious it should be represented in this Register of shipping, and I am instructed by them to examine and report on the various type of lake vessels now in construction. With this view, I intend, and hope soon to be able to visit the ship-building yards at Cleveland, and to continue the inspection of vessels building at the various yards on the lakes, and with the approval of my people at Paris, and I hope, the assistance of the underwriters, ship owners and builders, I trust we may arrive at a reliable and satisfactory system of classification for lake vessels.

F. D. HERRIMAN.

Chief Inspector American Lake Department, Bureau Veritas.

THE G. A. R. ENCAMPMENT AT WASHINGTON.

THE VALUE OF ELECTRICITY AT CELEBRATIONS AND FOR LIGHTING ON WATER OR LAND.

Now that the Lighthouse Board has undertaken to variegate the Statue of Liberty, on Bedloe's Island, New York Harbor, with brilliant colored electric lights, and the adoption of highly colored electric lights on steamyachts and other fancy tonnage, the capabilities of this powerful and tractable illuminant is being more widely adopted and it is now used where electricity would a few years ago have been proclaimed as an impossible lighting agency if not a highly dangerous one.

That public fetes and celebrations without electricity to enhance their splendor and give to them the necessary eclat, are becoming rarer, has been very adequately proved during the recent gathering of the veterans of the Grand Army, at Washington. The celebration was to be so grand in the daylight, that for it to have failed in the evening, when, parades over, the visitors were free to promenade Washington's magnificeet thoroughfares, would have cast a serious reflection on the committee in charge. It was felt that electricity only would satisfactorily answer the purpose, and therefore it was adopted as the only means by which a thoroughly brilliant illumination could be obtained.

To the decorative lamp department of the General Electric Co., which distinguished itself at the Actors' Fund Fair, last May, was confided the arduous task. The results were, beyond compare, the finest yet obtained, and elicited admiration and approval from every one, either visitor or resident.

The interest in the reunion centered itself about Pennsylvania avenue, stretching from the white Capitol to the Treasury and the Executive Mansion, and it was determined that the electrical display hould also be centered there.

Running from near the Pennsylvania railroad depot to the Treasury, pole lines were erected on both sides of the avenue. At short intervals along these two lines different corps badges were designed in small but intensely brilliant incandescent lamps, each corps badge being repeated three times at various points on the avenne in the national colors of red, white and blue. Above each corps badge the name of some notable fight in which the corps took conspicuous part or well-remembered sojourning place during the war, was written in electric lamps. At rarer intervals the portraits in oil of the leading war generals were suspended, each surrounded by a double border, the inner one of very small lamps, the outer of lamps of a larger size and higher candle power.

At the corner of Tenth street, in front of the "Washington Post," was erected a splendid anchor, about twenty feet high. When lighted, it blazed so brilliantly as to make it the most attractive set piece on the avenue. In front of the "Washington Star," twin stars of red and blue were placed, and a patriotic device gleamed from within the office windows.

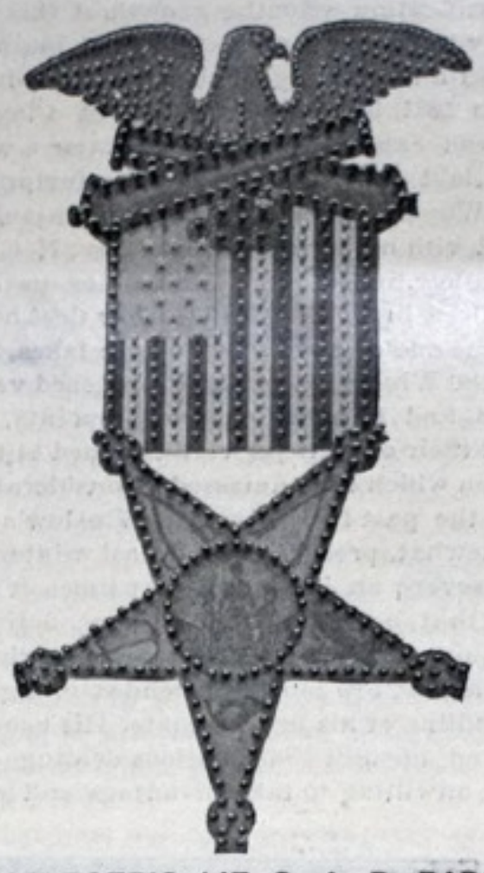
At the head of the avenue, at the entrance to the White Lot, was erected the most conspicuous design of the occasion. It was a monster fac-simile of the G. A. R. badge, eighteen feet high, entirely made up of incandescent lamps. The eagle was outlined in white lamps, the cannon in blue, the stars and stripes in theregulation colors, and the pendant star in amber lamps. This piece was duplicated at the corner of Seventeenth street, below the White House. From the children's stand, at the head of the avenue, the name of Lincoln, in white lights, evoked pathetic reminiscences from the veterans.

The illumination of the Treasury building presented considerable difficulty. This was overcome by arranging along the cornice at the top of the fluted columns a line of colored arc lamps, which stretched from the entrance to the White Lot almost entirely around the building. The red, white and blue globes of the lamps lent themselves admirably to the colors of the flags with which the building was hung. Colored arc lights were also used to illuminate the camp on the White Lot.

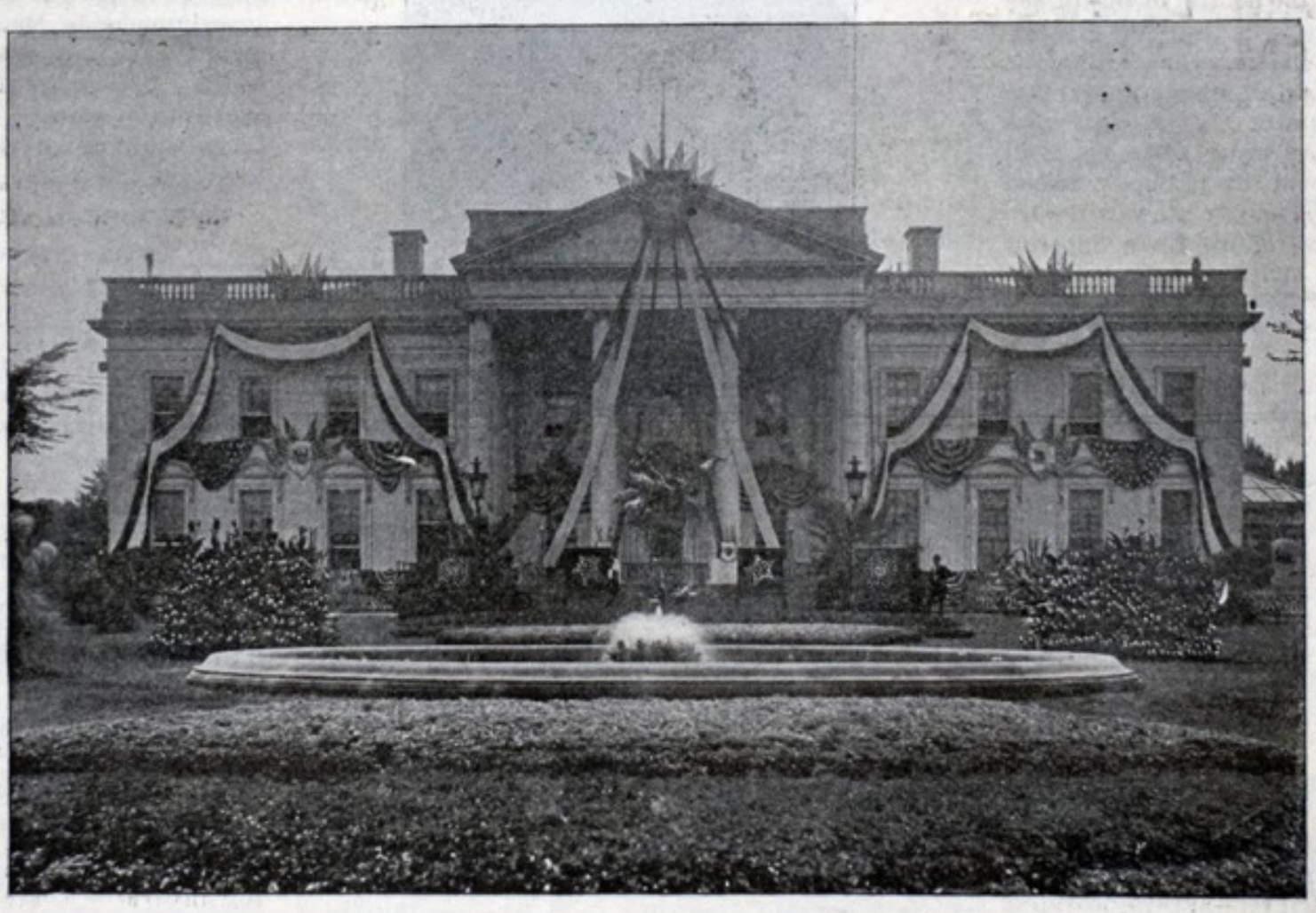
On the White House lawn, in front of the mansion, a most fairy-like effect was produced. Every bush, tree, fern and flower bed glistened with the light of innumerable miniature lamps, so suspended as to conceal all the mere practical details of installation. No less than ten revolving stars, each of different design, were also set up here, and constantly changing in design and color, reappearing and disappearing, obtained a well-merited meed of success. Over each entrance to the mansion was set a star of deep blue lamps.

A marvellous effect, and one never yet essayed to add to the brilliancy of an illumination, was obtained by the introduction of the search light. On the roof of the Washington Loan & Trust Co.'s building were set four 24-inch General Electric Co.'s projectors, built at Middletown, three facing the Capitol and one facing the Monument. During the evening, the brilliant rays of light from these projectors shot the national colors onto the clouds, or illuminated the surroundings of the city. The most marvellous effects were obtained, however, when the whole four were brought to bear on the Capitol or on the Monument. The nights being without moonlight, the background was absolutely black, and when the lights were thrown on the Capitol, it appeared as the magnificent white marble building it really is, but grandiose and awe-inspiring beyond conception, and many a veteran bears away with him an aspect of the Capitol which will live in his memory while he himself lives. The illuminated Monument was none the less effective. The white stone shaft springing up straight into the blackness of night, seemed like a supernatural finger pointing heavenward.

All this remarkable display was not obtained without great effort. Less than thirty days elapsed between the commencement of the work and the illumination. Poles had to be erected, and a whole three-wire system installed, drawing current from every available dynamo, public or private, in the city. In fact, not enough current could be procured.



AN ELECTRIC LIT G. A. R. BADGE.



ARRANGEMENT OF ELECTRICAL DISPLAY, WHITE HOUSE, WASHINGTON, BY GENERAL ELECTRIC COMPANY.

Two G. A. R. badges, sixty-three corps badges, the same number of mottoes and names, special devices such as the anchor and stars, had to be designed and executed. The streets had to be skillfully wired and socketed, the revolving wheels to be conceived and constructed. Projectors had to be brought from the factory and erected. It was a great undertaking, brought to a satisfactory termination. Some idea of the work can be gained from the fact that over twenty-five thousand incandescent lamps were used in the illumination, as well as over one hundred arc lamps.

Credit for the success of the illumination is to be rendered to Mr. A. D. Page, to whom carte blanche had been given, and to Mr. F. H. Clarke, the Washington representative, who were materially assisted by Mr. Fanshawe and Mr. McAllister, both skillful designers and versed in lamp requirements. The search lights were in charge of Mr. Gragg.

AN EAGLE CAPTURED OFF SHORE.

It is not unusual for birds of all sorts, and even those who are strong on the wing, to be driven off the land in a hard gale of wind. Last week an eagle, reported as a Nova Scotian bird, alighted on the yards of a Swedish steamer about one hundred miles southeast of Nantucket shoals. The bird measured nearly nine feet from tip to tip of its wings, and was so powerful that, although it was exhausted when it sought refuge on the yard, the combined strength of the crew was required to overpower and capture it.

It is of a dark brownish color, with white head and breast. Its talons are fully six inches in length. During the struggle with the men the bird drove its bill through the heavy cloth of a sailor's overcoat, undercoat, cardigan jacket and two undershirts and through the flesh of his arm to the bone.

There had been a heavy storm, with a strong westerly wind, the day previous to the capture of the eagle, and the bird was blown off shore during the gale.

The singular prisoner is to be taken back to Stockholm and turned over to a museum.

TALL FUNNELS—NATURAL DRAUGHT.

The plans for the new armoured cruiser, No. 3, provided by the last session of Congress, are found to include at least one radical innovation in the construction of war ships. The United States navy will be the first to carry into effect the idea as adapted to others than merchant steamers.

The three smokestacks of the new ship are each 100 feet high, which is from 30 to 40 feet higher than the stacks of any other war ship in the United States navy.

These towering funnels detract considerably from the beauty of the ship, and seem to give her an exceedingly awkward appearance, but in this case looks are sacrificed to utility. The increased height will give additional draught and do away with the necessity of forced draught in ordinary steaming.

They will also carry the smoke and gas from the furnaces above the military masts of the ships and give the men in the tops a chance to fight without being smoked out by their own people.

The high stacks have been adopted by the British merchant steamer Scot in the Cape trade and found to work admirably. Naval architects have for years been favorably impressed with the adoption of such measures, and there is everything in favor of high funnels, except perhaps the feature of exposure above the hull, to obviate which, even masts and yards have been sacrificed. Cruisers, however, should have the greatest rate of speed attainable, and to gain this end every consideration should be subservient to the main question, viz: that of speed and efficiency to maintain it.

Commander J. R. Bartlett has successfully passed his examination for promotion to the grade of captain. He will be given his commission immediately. Capt. Bartlett, U. S. N., has the distinction of being, if not the first, at least a moving spirit in the establishment of branch hydrographic offices, and the originator of the North Atlantic pilot charts, so valuable to the Western Ocean mariner of to-day.